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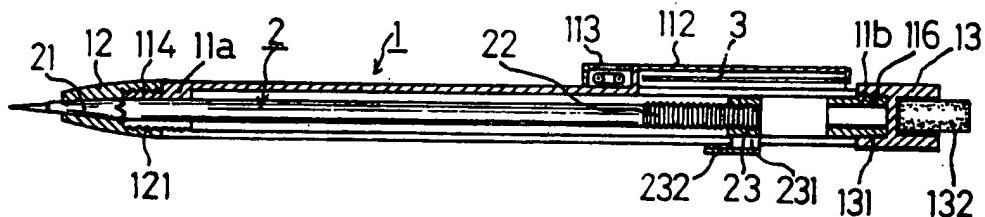
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**(54) Pencil**

(57) A writing implement comprises a barrel 1 having a longitudinal groove in its wall, a container 112 for miscellaneous items attached to the barrel, and a reduced diameter wood-sheathed pencil 2 with its rear end in a bracket 23 which is slidably mounted in the groove to enable extending and retracting of the pencil 2. A pencil grip and tightening head 11a, 12, 114, is provided at the front of the barrel 1 for holding the pencil 2 in place when extended.



**FIG. 3**

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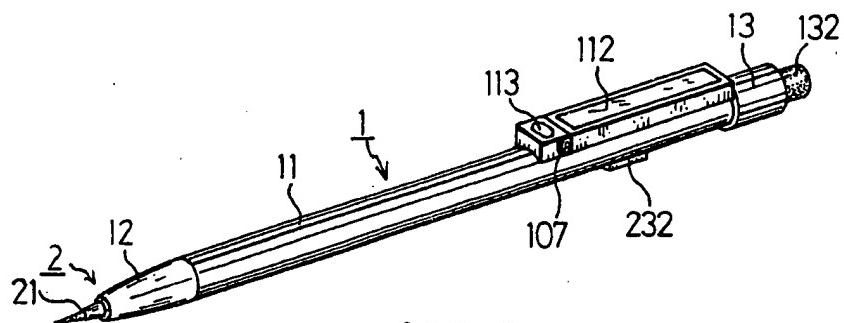


FIG. 1

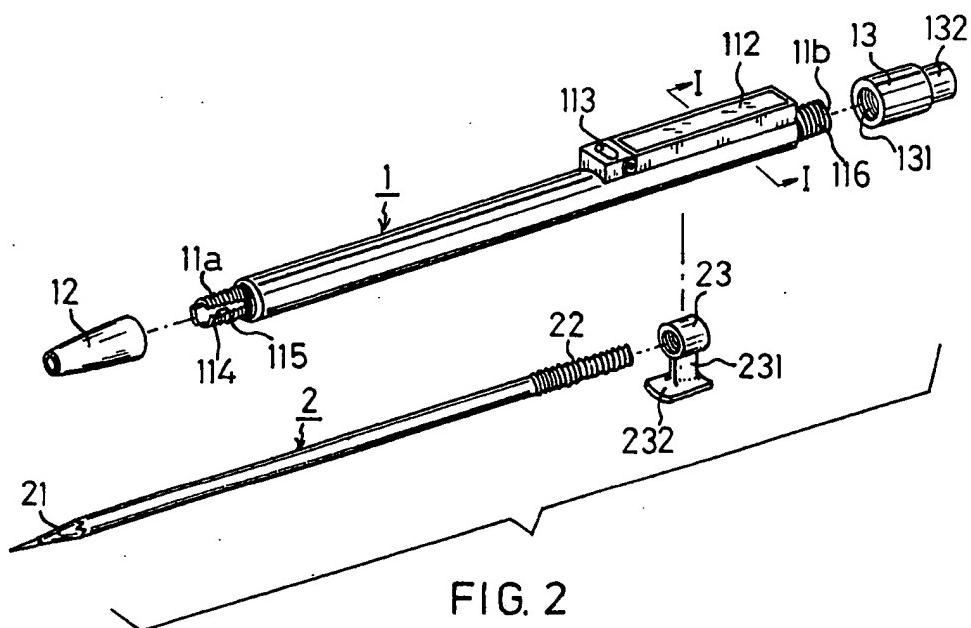


FIG. 2

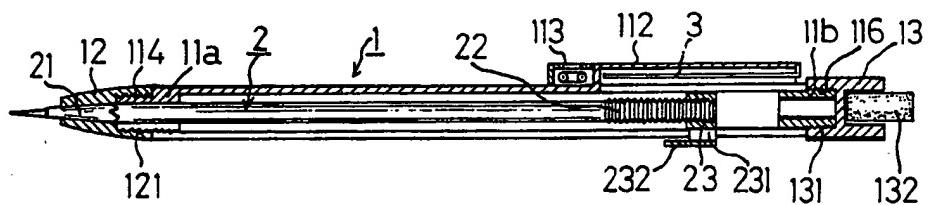


FIG. 3

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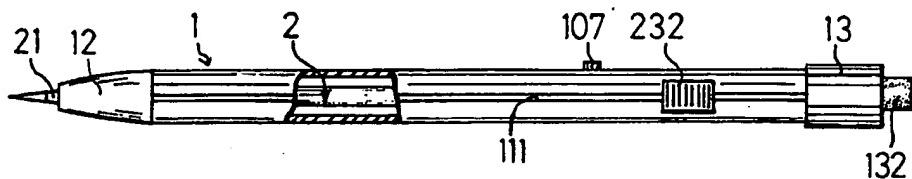


FIG. 4

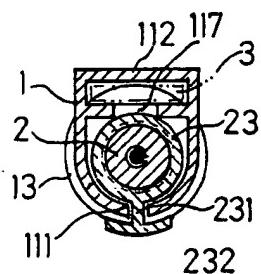


FIG. 5

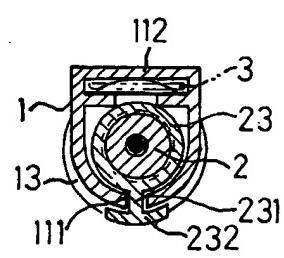


FIG. 6

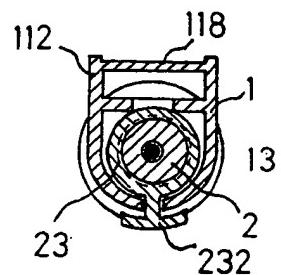


FIG. 7

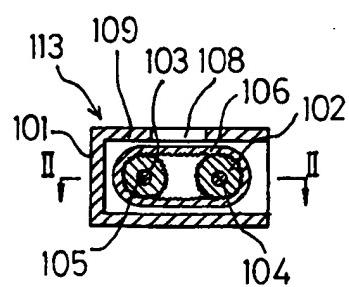


FIG. 8

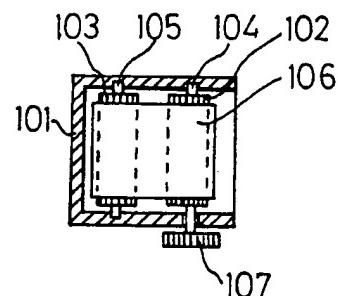


FIG. 9

## SPECIFICATION

### Improvements in or relating to writing implement

- 5 The present invention relates to writing implements.
- Pencils may be classified into three main categories: the conventional wooden pencil 10 that is sharpenable with knife or sharpener; the automatic or "propelling" pencil of which the lead is forwarded and retracted from a barrel by means of a pushing or turning mechanism; and a more recently disclosed so 15 called non-sharpening pencil, of which pieces of lead are pre-sharpened and held in individual seats made of plastics being chargeable to a hollow barrel like bullets, each bullet with a dull point after use being discarded and a 20 fresh one taking its place.
- All three kinds of pencil have disadvantages. Because the lead in a wooden pencil is tightly held in the wooden barrel, the pencil is comparatively stable and steady during writing and also less expensive. However, means for sharpening have to be provided and the shorter the barrel after successive sharpening, the harder it is for gripping.
- Although the non-sharpening pencil provides 30 the convenience of replacing a tip instead of sharpening it, rejecting a lead tip when it is blunt and only  $\frac{1}{3}$  or  $\frac{1}{2}$  is consumed is wasteful. Even though it can also be sharpened, it is meaningless and pointless to 35 sharpen a non-sharpening pencil and it is very difficult to perform a sharpening operation on such kinds of leads tips. The product life terminates as soon as novelty ceases to exist.
- The automatic pencil usually provides a 40 non-sharpening feature through the use of finer lead, which is thus liable to be broken. Since it is more expensive, generally only adults are potential users.
- The product longevity of conventional 45 wooden pencil is desirable. Small diameter wooden pencils have appeared on the market for easier sharpening. However, such pencils are hard to grip. Also, wooden pencils of any diameter require a protective cap to avoid
- 50 breakage of the lead when not in use.
- According to the invention, there is provided a writing implement comprising a cylindrical barrel and a wooden pencil, the barrel having a longitudinal guide groove and a 55 rectangular container, a pencil grip and tightening head being provided at the front end of the barrel and a cap being provided at the rear end of the barrel, the wooden pencil being retained in the barrel and having a plain or threaded rear end, there being further provided a nut-bracket for receiving the threaded or plain rear end of the wooden pencil and having a push tab disposed outside the guide groove to allow extending and retracting of 60 the pencil.
- 65

It is thus possible to provide a writing implement that retains the stability of a wooden pencil, is extendable and retractable like an automatic or propelling pencil, is protected with an easy grip barrel and cap.

There may be provided a member for indicating the week day, which member may be formed integrally with the barrel or otherwise.

A reduced diameter wooden pencil may be 75 used with its rear end threaded to be received in a nut-bracket slidably mounted in the guide groove. The pencil is capable of being sharpened by a knife or sharpener.

The cap may comprise a rear cap with 80 rubber eraser whose front end covers a rear opening of the small container.

The invention will be further described, by way of example, with reference to the accompanying drawings, in which:

85 Figure 1 is a perspective view of a writing implement constituting a preferred embodiment of the present invention;

Figure 2 is an exploded perspective view of the writing implement of Fig. 1;

90 Figure 3 is a longitudinal sectional view of the writing implement of Fig. 1;

Figure 4 is a bottom view with partial cut-away of the writing implement of Fig. 1;

Figure 5 is a cross sectional view along line 95 I-I of Fig. 1;

Figure 6 is a cross sectional view of the barrel of another embodiment;

Figure 7 is a cross sectional view of the barrel of still another embodiment;

100 Figure 8 is a sectional front view of a week-day indicating member; and

Figure 9 is a cross-sectional view along line II-II of Fig. 8.

Now referring to Figs. 1 to 4, a writing 105 implement constituting a preferred embodiment of the present invention comprises a barrel 1 and a core of wooden pencil 2.

Barrel 1 comprises a cylindrical wall 11 having a longitudinal guide groove 111 ex-

110 tending almost to its full length and a small rectangular container 112 disposed on the rear portion of and formed integrally with the barrel.

Screwed in the front end of the barrel cylinder 11 is a taper grip 11a having two to

115 four longitudinal splits 114 and threads 115 disposed on it. Screwed in the rear end of the barrel cylinder 11 is socket 11b with threads 116 on it. Adjacent the front end of the container 112 is a week-day indicating mem-

120 ber 113 which is formed separately and attached thereto with appropriate adhesive. A conical head 12 with inner thread 121 is

screwed on the taper grip 11a; a rear cap 13 with inner thread 131 and a rubber eraser

125 132 is screwed in the rear end of the barrel cylinder 11 to form the whole barrel 1.

The core of wooden pencil 2 is substantially a conventional wooden pencil of reduced diameter, of which the front end can be sharpened with a knife or sharpener. The rear end

130

22 of the core is threaded to be taken in a nut bracket 23, the outside diameter of a nut part of the bracket 23 being somewhat smaller than the inside diameter of the barrel 1. A leg 5 231 of the nut bracket 23 extends through the guide groove 111 of the barrel 1 and a push tab 232 is formed at the end of the leg 231 and is pushable by a user's finger to slide forward or rearward along the groove 10 111.

Referring to Fig. 5, the container 112 is formed integrally with the barrel cylinder 11 and communicates therewith through a length of aperture 117. Small items of flat shape, 15 such as a knife blade or a card printed with or a name or other interesting drawings or proverb etc., can be stored therein. In another embodiment shown in Fig. 6, the container 112 is formed flatter to contain only a printed 20 card and the material forming the barrel and the container is preferably transparent. The container 112 may also be formed as shown in Fig. 7, wherein the container is expanded to hold small items such as a specially designed 25 knife, the top of the container 112 being formed with a recess 118 so that a name card or the equivalent may be adhered thereupon or even engraved thereon with a pre-designed mold.

30 The week-day indicating member 113 has a box shaped body 101 with its rear end open as shown in Figs. 8 and 9. Retained in the body 101 is a pair of rollers 102, 103 mounted laterally within the box and rotatably 35 on respective axles 104, 105. An endless belt 106 with names of weekdays printed therein is wound about the rollers 102, 103, the inner surface of the endless belt 106 being made into coarse stripes so as to match with 40 the likewise surface feature of the rollers to increase friction therebetween to avoid slippage. One end of the axle 104 of the driving roller 103 projects out of the side wall of the box 101 and is provided with a turning knob 45 107 for driving of the indicating belt 106. On top of the box 101, a lid 109 with an indicating window 108 is provided.

The weekday indicating member 113 is 50 preassembled as an individual part to be adhered adjacent the container 112 on the barrel cylinder 11, because this arrangement is more convenient than forming the said member 113 integrally with the container 112 on the barrel cylinder 11. Although the member 55 113 may be formed integrally with the container 112 it would be much more difficult to the mold preparation.

The use of the writing implement is as follows. The wooden pencil 2 is usually hidden in the barrel 1 when not in use. Before 60 use, the conical head 12 is loosened with the hand to enable the splits 114 on the taper grip 11a to open. The tab 232 is pushed forward along the guide groove 111 and the pencil 2 is moved forward within the barrel 65

together with the nut bracket 23. The lead tip thus projects out of the conical head 12 by a desired length. The head 12 is then screwed up to tighten the taper grip 11a to hold 70 steady the pencil 2 in a position for writing. After finishing writing, the operation is reversed by first loosening the head 12 and then moving the tab 232 rearwardly until the pencil retracts into the barrel 1. The head 12 is again tightened. The weekday indicating member can be adjusted by turning of the knob 107.

When the pencil 2 is substantially used up so that only a short stub remains and the nut 80 bracket 23 has been moved to the foremost end, the head 12 is released, the stub is unscrewed from the nut 23, and refill comprising a new pencil 2 is inserted.

The rear opening or the entrance to the 85 container 112 is sealed up by the front end of the cap 13 as shown by the dotted line in Fig. 5. Unless the cap 13 is detached from the barrel, small items such as a knife blade cannot fall out from inside the container 112.

90 The eraser 132 may be replaced when used up by detaching the cap 13, pushing the unusable eraser from the front end of the cap with a small stick, and replacing it with a new one.

95 With the above-described structure, the pencil 2 is retractable into the barrel 1 and is protected therein. When projecting out for use, the pencil has the property of a conventional pencil which is steady. However, it is of 100 reduced diameter, and holding of the pencil is made easy by the use of the barrel and is substantially without fatigue of the fingers. The container and weekday indicating member provide extra convenience in use. The 105 pencil can be used to its shortest length possible without much waste. Besides, the pencil is sharpenable with an ordinary knife or sharpener to maintain an ever sharpening condition of the tip.

110 The above-described embodiments are given only for illustration purpose and not by way of limitation. Modification will become evident to those skilled in the art which will fall within the scope of attached claims. For 115 instance, instead of screwing up to the barrel, the conical head 12 and the cap 13 may also be provided by insertion into the barrel without threading. A spring clip may be provided in between the rear cap 13 and the barrel 120 cylinder 11, and the pencil may be inserted into the bracket without threading. A ball-point pen refill may be used instead of a wooden pencil.

125 CLAIMS

1. A writing implement comprising a cylindrical barrel and a wooden pencil, the barrel having a longitudinal guide groove and a rectangular container, a pencil grip and tightening head being provided at the front end of

- the barrel and a cap being provided at the rear end of the barrel, the wooden pencil being retained in the barrel and having a plain or threaded rear end, there being further
- 5 5 provided a nut-bracket for receiving the threaded or plain rear end of the wooden pencil and having a push tab disposed outside the guide groove to allow extending and retracting of the pencil.
- 10 2. A writing implement as claimed in claim 1, wherein the longitudinal guide groove extends almost the full length of the barrel and the rectangular container is formed integrally with and near the rear end of the
- 15 15 barrel, the pencil grip and tightening head comprising a taper grip with outside threading and at least two splits and being connected to the front end of the barrel, there being provided a threaded socket coupled with the rear
- 20 20 end of the barrel and a conical head screwed on the taper grip, and the cap comprising a detachable cap with a replacable rubber eraser screwed on the socket at the rear of the barrel.
- 25 3. A writing implement as claimed in claim 1 or 2, wherein a weekday indicating member is disposed adjacent the front end of the container.
4. A writing implement as claimed in any
- 30 30 one of the preceding claims, wherein the cap has a front end with an outside diameter greater than that of the barrel so that, when disposed at the rear of the barrel, the outside edge of the cap covers a rear opening or
- 35 35 entrance of the container.
5. A writing implement as claimed in claim 1, wherein the rear end of the wooden pencil of reduced diameter is of a plain type without threading.
- 40 6. A writing implement as claimed in claim 1, wherein the engagement between the rear end of the wooden pencil and the bracket is of tightened insertion without screwing up.
7. A writing implement as claimed in
- 45 45 claim 1, wherein the wooden pencil is of cylindrical, hexagonal or polygonal cross-sectional shape, the rear end of which is provided with or without threads.
9. A writing implement substantially as
- 50 50 hereinbefore described with reference to and as illustrated in the accompanying drawings.